

Haskell Lake Area Petroleum Contamination Site (Tower Standard LUST)

Meeting Date: 25 May 2017

Location: teleconference

Meeting Participants:	WDNR	Chris Saari
	Lac du Flambeau	Kristen Hanson
	REI	Dave Larsen
	EPA R5 LCD	Bob Egan
	EPA R5 TIAO	Anthony Greenwater

Discussion Items:

1. Data model review.

WDNR has access to the data model online and has begun initial review. Basic user instructions were provided by EPA and additional technical assistance may be available. LDF grouped its model criticisms into three categories: 1) control points; 2) incorrect screened intervals for 14 wells; and 3) data deletion from slide BH-17 and other slides. A meeting was suggested, but not scheduled, for next week to discuss with EPA ORD user Tom Kady. LDF will provide detailed model comments to the entire workgroup before that discussion.

2. Adequacy of site characterization.

WDNR described cost-to-date at the site as above that of a typical site. LDF described unusual features of both site history and hydrogeology and stated that impacts from the earlier cleanup limit applicability of the original site characterization. LDF identified soil stratigraphy as a major datagap. The workgroup did not reach consensus whether data from additional wells support complete site characterization or remedial design. WDNR prefers to avoid additional time-consuming investigation and initiate interim source action now.

3. Well placement.

All agreed that locations recommended by LDF and EPA are similar to those discussed last year, except possibly more wells on the west and fewer on the east. The cost of new well installation was roughly estimated at \$150k. Following review of the data model, WDNR expects to reach preliminary conclusions regarding LDF/EPA recommendations by 1 June 2017.

4. Potential remedial options.

No procedure on choice of remedial action was clearly defined, but PECFA always favors the lowest-cost effective method. All agreed that two generic options merit consideration: source area soil removal and AS/SVE. Other proven technologies are considered potentially harmful to water quality to Haskell Lake (chemical injection) or cost-prohibitive (thermal). A tabulated summary of remedial options previously assembled by EPA lacks specifics, but EPA's new task order is expected to provide more detailed and implementable information.

- **excavation.**

Current EPA task order planning includes evaluating the feasibility of excavation. All agreed there is sufficient data to design source soil excavation, if selected as interim action. Excavation is commonly utilized as an interim action under LDF cleanup procedures. LDF described the area as a local groundwater high, allowing easier dewatering, especially with use of sheet-piling to limit groundwater migration.

Sheet-piling is rarely used under PECFA, due to cost. Both EPA and LDF disapproved of on-site disposal of treated water, even though off-site disposal would likely significantly increase de-watering costs. There is a highway setback requirement for excavation that would limit the area of application. Impacts to the property from excavation were recognized. Excavation was also said to pose a hazard of additional contaminant smearing. The question was raised whether excavation would allow closure under PECFA within budget.

- **air sparging / soil vapor extraction.**

WDNR and EPA ORD agree that the site is a textbook case for design and application of AS/SVE, noting only that remediation will take some time. Both agencies consider available data sufficient to move to source area treatment. Pending receipt of examples of AS/SVE success stories in similar settings, LDF disagrees that site characterization is sufficient for active systems less invasive than excavation. Tribal concerns include interbedded soil layers that could short out AS/SVE systems and that AS/SVE will not mobilize heavy metal contaminants. WDNR may also be able to provide some examples of successful application.

5. Parallel activities.

Scheduling pressure motivated possibility of moving forward on parallel tracks; specifically, to expedite interim cleanup under ongoing characterization. LDF procedures allow for parallel efforts to improve site characterization while implementing interim remedial action (commonly source soil removal). The group also considered it feasible that interim remedial action and final action design could move forward concurrently.

In considering parallel activities, LDF stated that the time for interim action has been squeezed by delays in EPA task orders and other commitments: 1) the excavation FS was expected in the spring, but now has been delayed to fall 2017; 2) basic characterization needs are unmet, such as groundwater flow direction; and 3) filling of datagaps and definition of the path forward have been discussed for years, but not achieved. LDF raised the possibility that PECFA may not ultimately be a benefit to the site.

6. Procedural requirements and considerations.

The LDF response code has been in place since 2008 and applies to older sites. Under the code, sites are required to meet standards at time of closure. After some discussion, it was unclear how much control property owners can exert over choice of remedial action under PECFA, but all agreed that EPA and LDF should discuss potential remedial actions soon with the property owners, including potential physical impact to the property from different remedial approaches. REI has already talked to owners about remediation generally; it was noted that the owners wish to sell the property.

7. Remediation timeline and funding.

Total remaining PECFA funding is about \$400k. Next EPA task order may be in place by late summer; delay was attributed to HQ backlog. Task order is expected to address all miscellaneous needs up to and including FS for interim excavation action. The possibility of other short-term options under PECFA was mentioned but not explained in detail. EPA pointed out that shared costs will require careful pre-planning.

The project is about six months behind the workplan jointly prepared in 2016. There is some possibility that the usual eight quarters of post-remediation monitoring could be truncated or waived altogether, but such relief is only granted by WDNR when remediation to standard is obvious. The following waypoints will allow routine site closure before the PECFA sunset of June 2020:

- Install final remedial action by end of CY 2017.
- Complete 8 quarters of post-remediation monitoring in CY 2018-2019.
- Submit site for closure by end of CY 2019.
- Decommission wells and other installations in spring of 2020.
- Certify closure by June 2020.

Action items:

1. LDF will provide detailed comments on model shortcomings to all workgroup participants (< 1 JUNE 2017).
2. As needed, a meeting will be convened to discuss the model with EPA ORD (TBD).
3. EPA and LDF will invite the property owners to a discussion of remedial options and impacts (TBD).
4. WDNR will review data model and reach preliminary conclusions on proposed monitoring wells (2 June 2017).
5. WDNR will host the next workgroup teleconference. Primary agenda item will be consideration of recommended monitoring well locations. Secondary item will be continued discussion of interim action (0800h, 9 June 2017).